

General

Guideline Title

Alteplase for treating acute ischaemic stroke (review of technology appraisal guidance 122).

Bibliographic Source(s)

National Institute for Health and Clinical Excellence (NICE). Alteplase for treating acute ischaemic stroke (review of technology appraisal guidance 122). London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sep. 37 p. (Technology appraisal guidance; no. 264).

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: National Institute for Health and Clinical Excellence (NICE). Alteplase for the treatment of acute ischaemic stroke. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Jun. 22 p. (Technology appraisal guidance; no. 122).

Recommendations

Major Recommendations

This guidance replaces National Institute for Health and Clinical Excellence (NICE) technology appraisal guidance 122 (published in June 2007).

- Alteplase is recommended within its marketing authorisation for treating acute ischaemic stroke in adults if:
 - Treatment is started as early as possible within 4.5 hours of onset of stroke symptoms, and
 - Intracranial haemorrhage has been excluded by appropriate imaging techniques.
- The Committee concluded that alteplase administered between 3 and 4.5 hours after onset of stroke symptoms was an effective treatment for acute ischaemic stroke because it decreased the probability of disability.
- The Committee concluded that alteplase administered between 0 and 4.5 hours after onset of stroke symptoms was an effective treatment for acute ischaemic stroke because it decreased the probability of death or dependence.
- The Committee agreed that alteplase either dominated standard care or had an incremental cost-effectiveness ratio (ICER) below £10,000 per quality-adjusted life year (QALY) gained depending on the time-to-treatment window considered. The Committee concluded that treating acute ischaemic stroke with alteplase within 0 to 4.5 hours of onset of stroke symptoms was a cost-effective use of National Health Services (NHS) resources.

Clinical Algorithm(s)

This guidance has been incorporated into a [NICE Pathway for Stroke](#) , along with other related guidance and products.

Scope

Disease/Condition(s)

Acute ischaemic stroke

Guideline Category

Assessment of Therapeutic Effectiveness

Treatment

Clinical Specialty

Emergency Medicine

Internal Medicine

Neurology

Intended Users

Advanced Practice Nurses

Emergency Medical Technicians/Paramedics

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

- To evaluate the clinical effectiveness and cost-effectiveness of alteplase for the treatment of acute ischaemic stroke
- To review the National Institute for Health and Clinical Excellence (NICE) technology appraisal guidance 122 (published in June 2007).

Target Population

Adult patients with acute ischaemic stroke within 4.5 hours of symptom onset

Interventions and Practices Considered

Alteplase (Actilyse)

Major Outcomes Considered

- Clinical effectiveness
 - Disability (Modified Rankin Scale)

- Functional recovery
- Neurological deficit
- Mental health including anxiety and depression
- Mortality
- Length of hospital stay
- Adverse events of treatment including bleeding events
- Health-related quality of life
- Cost-effectiveness

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform an assessment of the manufacturer's submission on the technology considered in this appraisal and prepare an Evidence Review Group (ERG) report. The ERG report for this technology appraisal was prepared by the School of Health and Related Research (ScHARR), the University of Sheffield (see the "Availability of Companion Documents" field).

Clinical Effectiveness

Critique of the Methods Used by the Manufacturer to Systematically Review Clinical Effectiveness Evidence

The review aimed to update the Cochrane review on thrombolysis but restricting it to search for randomised controlled trials (RCTs) of alteplase.

Searches

An existing search strategy from the Cochrane review "Thrombolysis for acute ischemic stroke" was adapted by excluding all thrombolytic drug terms other than those relating to alteplase. The search was limited to RCTs published from 2008 onwards as the Cochrane review searches were conducted in 2008.

The searches were conducted on the following databases via the OVID platform:

- Medline-R In-Process and Other Non-Indexed Citations
- Medline-R 1946-Present with Daily Update
- Embase
- All Evidence Based Medicine (EBM) reviews (Cochrane Database of Systematic Reviews [DSR], American College of Physicians [ACP] Journal Club, Database of Abstracts of Reviews of Effectiveness [DARE], Cochrane Controlled Trials Register [CCTR], Cochrane Methodology Register [CMR], Health Technology Assessment [HTA], National Health Service Economic Evaluation Database [NHSEED])
- EconLit

Searches were conducted on 14th February 2012. The specific date span for each database is not given. Additional searches were carried out on internal company databases; however, this did not identify any extra studies.

The search strategy was appropriate and basing it on an existing published review ensured the population and intervention terms were comprehensive. However, the terms used to identify RCTs are different to those used in the Cochrane Review. It is not stated if a published search filter was used. Some of the terms used to find RCTs retrieved 0 results and therefore it is possible that alternative terms would have been more appropriate.

By amending the search terms, an additional 9 references are found in the Medline search. However, 7 of these were found in the Embase search so were not missed.

There are no additional comments about the Embase search strategy, as this used the same RCT terms as the original Cochrane Review.

The specific search strategies for EBM reviews and EconLit are not included so it is not possible to comment on these. The assumption is that the Medline or Embase strategies were used.

Inclusion/Exclusion Criteria Used in the Study Selection

The study selection process was based on the Cochrane review of thrombolysis, but was adapted to restrict to use of alteplase within UK marketing authorisation. This was appropriate as it reflected the NICE scope. The population was restricted to adults aged 18 to 80 with acute ischaemic stroke (AIS), without intracranial bleeding, confirmed by brain imaging. The intervention was alteplase in addition to standard medical and supportive management. The intervention was restricted to 0.9mg/kg alteplase (to a maximum of 90mg, 10% as initial intravenous bolus, 90% as infusion over the subsequent 60 minutes) with treatment administration within the 0 to 4.5 hour time period. These inclusion criteria were appropriate as they conform with the licence for alteplase and the NICE scope.

The manufacturer's submission (MS) states that the main comparator was placebo or standard medical and supportive management without thrombolysis. It was appropriate that there was no active comparator, as alteplase is currently the only thrombolytic agent licensed in the UK for use in AIS. The comparator used in study selection in the MS was placebo. This was more restrictive than stipulated in the NICE scope which stated "standard medical and supportive management that does not include alteplase". Placebo controlled trials may be considered less prone to bias than trials in which the comparator is no additional treatment, as the administration of placebo would allow blinding of patients and clinicians. In the case of alteplase, it is difficult to ensure that clinician blinding would be effective. The appearance of the drug would differ from placebo, as alteplase froths when shaken in solution with water or normal saline, and thus normal saline does not form an identical placebo. Also, the biological effect of thrombolytic therapy may be apparent (for example, prolonged bleeding at venepuncture sites, easy bruising, gingival or conjunctival haemorrhages). In practice, the inclusion of non-placebo comparator at study selection would only allow the possibility of one additional trial, IST-3, and the results of this were not available at the time of MS.

The MS states that the primary outcome measures were death or dependency and mortality, however the study selection exclusion criteria did not exclude on the basis of outcomes, suggesting that other outcomes specified in the NICE scope were considered. Study design was restricted to RCTs. Given the known availability of RCTs on the topic, including RCTs and not lower quality studies was appropriate.

Refer to Section 4.1 of the ERG Report (see "Availability of Companion Documents" field) for more information.

Cost Effectiveness

ERG Comment on Manufacturer's Review of Cost-effectiveness Evidence

The MS does not explicitly state the objectives of the cost-effectiveness review. The cost-effectiveness search was conducted in December 2011 on the following databases:

- EMBASE via Ovid (1988-present)
- MEDLINE via Ovid (1948-present)
- NHS EED via Metaxis (1990-present)
- MEDLINE In-Process via Ovid (1948-present)
- EconLit via Ovid (1961-present)

The search strategy was appropriate, and standard cost-effectiveness terms were used to identify economic evaluations, although it is not stated whether this was using a published methodological search filter or not. There is a slight error in the presentation of the Embase search strategy, step 28 is not included in the combination of terms; however, this would not have affected the search results. In addition, the MEDLINE In-Process strategy is unclear as it appears to also include MEDLINE (1948-present) as MeSH headings are not available in the MEDLINE In-Process database. This is a minor point which again would not affect the results of the search.

Inclusion and Exclusion Criteria

The MS does not explicitly state the inclusion criteria. However, MS provides the following table which can be considered as de facto inclusion criteria.

Table: Inclusion Criteria for Cost-effectiveness Review

Study Design	Cost-effectiveness analysis, cost-utility analysis, cost-benefit analysis, cost-consequence analysis
Setting	Any location

Population	Acute stroke patients
Intervention	Actilyse [®] , Alteplase rt-PA, rtPA
Comparator(s)	Any
Outcome(s)	Cost per quality-adjusted life year (QALY) and/or cost per unit of effect
Time Period	No restriction

The MS does not state the exclusion criteria.

Number of Source Documents

Clinical Effectiveness

Ten randomised controlled trials (RCTs) and one observational study were included in the review.

Cost Effectiveness

- Nine studies were included in the review
- The manufacturer submitted an economic model.

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform an assessment of the manufacturer's submission on the technology considered in this appraisal and prepare an Evidence Review Group (ERG) report. The ERG report for this technology appraisal was prepared by the School of Health and Related Research (SchARR), the University of Sheffield (see the "Availability of Companion Documents" field).

Clinical Effectiveness

Quality Assessment

Table 12 and Table 13 of the ERG report (see the "Availability of Companion Documents" field) provide quality assessment of included trials.

Evidence Synthesis

The manufacturer's submission (MS) presents meta-analyses using the Mantel-Haenszel method to calculate relative risks (RR). This was an appropriate method. The Cochrane handbook recommends presenting RR data as they are more easily interpretable than odds ratios, and the Mantel-Haenszel method is reliable even when few trials are available for analysis. Meta-analyses are presented for both fixed and random effects,

as recommended by Cochrane.

There were no additional trials identified to those included in the 2007 NICE Single Technology Appraisal TA122. The main evidence was provided by meta-analysis of the European-Australasian Acute Stroke Study (ECASS) II and National Institute of Neurological Disorders and Stroke (NINDS) trials. Sensitivity analyses included the Alteplase Thrombolysis for Acute Noninterventional Therapy in Ischemic Stroke (ATLANTIS) A and ATLANTIS B trials. For the 3-4.5 hour treatment window, the main evidence was provided by the ECASS III trials. Sensitivity analyses included CIC data from the ATLANTIS A, ATLANTIS B and the ECASS II trials in meta-analyses. Table 15 of the ERG report shows RRs generated by meta-analyses. Study results of ECASS III are shown in the Table, alongside meta-analyses.

For the 0-3 hour treatment window, there was no statistically significant difference in all-cause mortality at 3 months in either the fixed or random effects meta-analysis. There was an increased risk of symptomatic intracranial haemorrhage (SICH), RR 4.90 (1.90-12.61) $p=0.001$ significant by fixed meta-analysis, but failing to reach significance by random effects meta-analysis. The results of the sensitivity analysis incorporating data from the ATLANTIS trial were similar although in this analysis the RR for SICH was significantly higher for both fixed and random effects meta-analysis.

Death or dependency at three months follow-up significantly favoured alteplase, RR 0.81 (95%CI 0.72-0.92) $p=0.002$, by the meta-analysis of the two main trials which included 393 participants allocated to alteplase, and 389 to placebo. Similarly, by the sensitivity analysis including $n=416$ alteplase, and $n=427$ placebo participants, RR 0.82 (95%CI 0.72-0.93) $p=0.002$, death or dependency at three months follow-up significantly favoured alteplase.

For the 3-4.5 hour treatment window, the main evidence used in the MS is the ECASS III RCT. This RCT included $n=418$ alteplase and $n=403$ placebo participants. In the ECASS III trial, death or dependency at three months follow-up did not show a statistically significant treatment effect RR (for alteplase with reference to placebo) 0.87 (95%CI 0.73-1.05) $p=0.14$. Sensitivity analysis using commercial in confidence (CIC) data from an additional three studies, alteplase $n=694$, placebo $n=694$, produced an RR which significantly favoured alteplase if analysed by fixed-effect methods RR 0.87 (0.78-0.99) $p=0.03$, showing a similar trend that failed to reach significance if analysed by random-effect methods 0.87 (0.74-1.04) $p=0.12$. As can be seen, the RR values were similar, and this difference can be attributed to the more conservative estimates produced by random-effect analyses than by fixed-effect analyses. For the 3-4.5 hour treatment window, there was no statistically significant difference in all-cause mortality at 3 month, but there was a significantly increased risk of SICH, RR 4.82 (1.06-21.87) $p=0.04$.

Considering the 0-4.5 hour treatment window, analysis of the two main trials of 0-3 hours, $n=393$ alteplase and $n=389$ placebo, and the main trial of 3-4.5 hours, $n=418$ alteplase and $n=403$ placebo, random-effects meta-analysis showed an RR 0.83 (0.75-0.92) $p=0.0006$, significantly favouring alteplase. Again, there was no statistically significant increase in all-cause mortality at 3 months, but there was a significantly increased risk of SICH.

Refer to Section 4 of the ERG Report (see the "Availability of Companion Documents" field) for detailed discussion of methods used to analyze clinical effectiveness.

Cost-Effectiveness

Model Structure

The economic model is an extension of the economic model constructed and published as part of the Health Technology Assessment (HTA) of thrombolytic therapy by Sandercock et al. (Sandercock, P., Berge, E., Dennis, M., Forbes, J., Hand, P., Kwan, J. et al. A systematic review of the effectiveness, cost-effectiveness and barriers to implementation of thrombolytic and neuroprotective therapy for acute ischaemic stroke in the NHS. *Health Technology Assessment [Winchester, England]* 2002; 6[26], i-102). The model has been replicated using the same structure and inputs described in the text of the published appraisal, with parameters revised using up-to-date data on costs and effects where possible. The economic evaluation extends the Sandercock et al. analysis further by incorporating the efficacy evidence for the 3-4.5 hour treatment window sub-group as reported in ECASS III. Use of the relative risks for this treatment window enables the effectiveness estimate to reflect the extended product licence.

The model is split into 3 phases:

- Phase 1: Patients enter phase I with acute ischemic stroke (AIS) with confirmed eligibility for alteplase treatment. It is during this phase that the treatment effect of alteplase is applied.
- Phase II. Patients enter phase II at 6 months. No treatment effect is applied here.
- Phase III: Patients enter phase III at 12 months. During phase III a 12 month cycle length is applied for the rest of the lifetime model.

The model has a Markov structure, a diagram of the model, provided in the MS, is shown in Figure 1 of the ERG report (see the "Availability of Companion Documents" field).

Refer to Section 5 of the ERG report (see the "Availability of Companion Documents" field) for more information on cost-effectiveness analysis.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Considerations

Technology appraisal recommendations are based on a review of clinical and economic evidence.

Technology Appraisal Process

The National Institute for Health and Clinical Excellence (NICE) invites 'consultee' and 'commentator' organisations to take part in the appraisal process. Consultee organisations include national groups representing patients and carers, the bodies representing health professionals, and the manufacturers of the technology under review. Consultees are invited to submit evidence during the appraisal and to comment on the appraisal documents.

Commentator organisations include manufacturers of the products with which the technology is being compared, the National Health Service (NHS) Quality Improvement Scotland and research groups working in the area. They can comment on the evidence and other documents but are not asked to submit evidence themselves.

NICE then commissions an independent academic centre to review published evidence on the technology and prepare an 'assessment report'. Consultees and commentators are invited to comment on the report. The assessment report and the comments on it are then drawn together in a document called the evaluation report.

An independent Appraisal Committee then considers the evaluation report. It holds a meeting where it hears direct, spoken evidence from nominated clinical experts, patients and carers. The Committee uses all the evidence to make its first recommendations, in a document called the 'appraisal consultation document' (ACD). NICE sends all the consultees and commentators a copy of this document and posts it on the NICE website. Further comments are invited from everyone taking part.

When the Committee meets again it considers any comments submitted on the ACD; then it prepares its final recommendations in a document called the 'final appraisal determination' (FAD). This is submitted to NICE for approval.

Consultees have a chance to appeal against the final recommendations in the FAD. If there are no appeals, the final recommendations become the basis of the guidance that NICE issues.

Who Is on the Appraisal Committee?

NICE technology appraisal recommendations are prepared by an independent committee. This includes health professionals working in the NHS and people who are familiar with the issues affecting patients and carers. Although the Appraisal Committee seeks the views of organisations representing health professionals, patients, carers, manufacturers and government, its advice is independent of any vested interests.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

The manufacturer developed a Markov model simulating patients with acute ischaemic stroke who do or do not receive alteplase within 4.5 hours of onset of symptoms. Patients were modelled through 3 possible health states: independent, dependent and dead. The independent state was defined by a modified Rankin scale score of 0–2 and the dependent state by a modified Rankin scale score of 3–5. The model had 3 time phases: from 0 to 6 months when the model assumed the treatment effect of alteplase was complete at 90 days and maintained at 6 months; from 6 to 12 months when the model assumed no further treatment effect; and beyond 12 months when the model also assumed no further treatment effect from alteplase. However, beyond 12 months the model assumed that people in the dependent or independent states could have a recurrent stroke. The

model also assumed that people in the dependent state at 12 months and beyond do not move to an independent state, and that people in the independent state at 12 months and beyond do not move to a dependent state unless they survive a recurrent stroke. The model assumed a lifetime horizon with a cycle length of 6 months for the first 12 months, followed by cycles of 12 months thereafter.

Summary of Appraisal Committee's Key Conclusions on the Manufacturer's Economic Model

Availability and Nature of Evidence

The Committee noted that the model structure and many of the input parameters were identical to those used in the economic model for the National Institute for Health and Clinical Excellence (NICE) technology appraisal guidance 122 (0 to 3-hour window) and agreed that this approach was appropriate. The Committee concluded that the economic model adhered to the NICE reference case for economic analysis and the modelling approach was reasonable.

Uncertainties Around and Plausibility of Assumptions and Inputs in the Economic Model

The Committee noted that the manufacturer had assumed that the relative treatment effect of alteplase was maintained beyond 90 days up to 6 months in the model with no longer-term survival benefit beyond this point. The Committee considered that this may have been a conservative approach if alteplase offers a survival advantage compared with placebo beyond 6 months, a proposition the Committee found plausible, although not currently proven statistically, given that alteplase was associated with a reduction in death or dependence at 90 days.

Incorporation of Health-Related Quality-of-Life Benefits and Utility Values

The Committee was aware that the utility values were not adjusted over time in the model, which may have overestimated the quality-adjusted life-years (QALYs) accrued by people in the independent health state and therefore biased the results in favour of alteplase. However, the Committee considered that this was not a crucial limitation of the model because the incremental cost-effectiveness ratios (ICERs) were not sensitive to changes in the utility values in the manufacturer's sensitivity analyses, and therefore any downward adjustment over time would have had a small impact on the ICERs. The Committee was also aware that the manufacturer assumed that people who had a symptomatic intracranial haemorrhage in the economic model incurred the additional one-off cost of a computed tomography scan but experienced no further disutility beyond that captured in the dependent or independent health states. The Committee heard from the clinical specialists that this assumption was reasonable.

What Are the Key Drivers of Cost Effectiveness?

The ICERs were robust to changes in most input parameters, except for the relative risks of death and death or dependence for treatment with alteplase applied in the first phase of the model.

Most Likely Cost-effectiveness Estimate (Given as an ICER)

The Committee agreed that alteplase either dominated standard care or had an ICER below £10,000 per QALY gained depending on the time-to-treatment window considered. The Committee concluded that treating acute ischaemic stroke with alteplase within 0 to 4.5 hours of onset of stroke symptoms was a cost-effective use of National Health Service resources.

Refer to Sections 3 and 4 of the original guideline document for additional information on cost-effectiveness.

Method of Guideline Validation

External Peer Review

Description of Method of Guideline Validation

Consultee organizations from the following groups were invited to comment on the draft scope, Assessment Report and the Appraisal Consultation Document (ACD) and were provided with the opportunity to appeal against the Final Appraisal Determination.

- Manufacturer/sponsors
- Professional/specialist and patient/carer groups
- Commentator organisations (without the right of appeal)

In addition, individuals selected from clinical expert and patient advocate nominations from the professional/specialist and patient/carer groups were also invited to comment on the ACD.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

The Appraisal Committee considered clinical and cost-effectiveness evidence and a review of this submission by the Evidence Review Group. For clinical effectiveness, one randomised controlled trial (RCT) was the main source of evidence (in addition to the RCTs included in NICE TA122). For cost-effectiveness, the manufacturer's model was considered.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of alteplase for the treatment of acute ischemic stroke

Potential Harms

The summary of product characteristics lists the following adverse reactions for alteplase: haemorrhage (intracranial and gastrointestinal), recurrent ischaemia or angina, hypotension, heart failure, pulmonary oedema and reperfusion arrhythmias.

For full details of side effects and contraindications, see the summary of product characteristics available at <http://emc.medicines.org.uk/>

Contraindications

Contraindications

Alteplase is contraindicated in patients with severe stroke and in patients with minor neurological deficit or with symptoms which are rapidly improving. It is also contraindicated in patients with prior stroke in the previous 3 months and in patients with any history of prior stroke and concomitant diabetes. Further contraindications are given in the Summary of Product Characteristics available at <http://emc.medicines.org.uk/>

Qualifying Statements

Qualifying Statements

- This guidance represents the views of the National Institute for Health and Clinical Excellence (NICE) and was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.
- Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

Implementation of the Guideline

Description of Implementation Strategy

- The Secretary of State and the Welsh Assembly Minister for Health and Social Services have issued directions to the National Health Service (NHS) in England and Wales on implementing National Institute for Health and Clinical Excellence (NICE) technology appraisal guidance. When a NICE technology appraisal recommends use of a drug or treatment, or other technology, the NHS must usually provide funding and resources for it within 3 months of the guidance being published. If the Department of Health issues a variation to the 3-month funding direction, details will be available on the NICE website. When there is no NICE technology appraisal guidance on a drug, treatment or other technology, decisions on funding should be made locally.
- The technology in this appraisal may not be the only treatment for acute ischaemic stroke recommended in NICE guidance, or otherwise available in the NHS. Therefore, if a NICE technology appraisal recommends use of a technology, it is as an option for the treatment of a disease or condition. This means that the technology should be available for a patient who meets the clinical criteria set out in the guidance, subject to the clinical judgement of the treating clinician. The NHS must provide funding and resources (in line with the section above) when the clinician concludes and the patient agrees that the recommended technology is the most appropriate to use, based on a discussion of all available treatments.
- NICE has developed tools to help organisations put this guidance into practice (listed below). These are available on the [NICE website](#) (see also the "Availability of Companion Documents" field).
 - Costing template and report to estimate the national and local savings and costs associated with implementation.
 - Audit support for monitoring local practice.

Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

Patient Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Timeliness

Identifying Information and Availability

Bibliographic Source(s)

National Institute for Health and Clinical Excellence (NICE). Alteplase for treating acute ischaemic stroke (review of technology appraisal guidance 122). London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sep. 37 p. (Technology appraisal guidance; no. 264).

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2007 Jun (revised 2012 Sep)

Guideline Developer(s)

National Institute for Health and Care Excellence (NICE) - National Government Agency [Non-U.S.]

Source(s) of Funding

National Institute for Health and Clinical Excellence (NICE)

Guideline Committee

Appraisal Committee

Composition of Group That Authored the Guideline

Committee Members: Dr Amanda Adler (*Chair*), Consultant Physician, Addenbrooke's Hospital; Professor Ken Stein (*Vice Chair*), Professor of Public Health, Peninsula Technology Assessment Group (PenTAG), University of Exeter; Dr Ray Armstrong, Consultant Rheumatologist, Southampton General Hospital; Dr Jeff Aronson, Reader in Clinical Pharmacology, University Department of Primary Health Care, University of Oxford; Professor John Cairns, Professor of Health Economics Public Health and Policy, London School of Hygiene and Tropical Medicine; Dr Mark Chakravarty, External Relations Director - Pharmaceuticals & Personal Health, Oral Care Europe; Mark Chapman, Health Economics and Market Access Manager, Medtronic UK; Professor Fergus Gleeson, Consultant Radiologist, Churchill Hospital, Oxford; Eleanor Grey, Lay member; Dr Neil Iosson, General Practitioner; Terence Lewis, Lay Member; Professor Ruairidh Milne, Director of Strategy and Development and Director for Public Health Research at the National Institute for Health Research (NIHR) Evaluation, Trials and Studies Coordinating Centre at the University of Southampton; Dr Rubin Minhas, General Practitioner and Clinical Director, BMJ Evidence Centre; Dr Elizabeth Murray, Reader in Primary Care, University College London; Dr Peter Norrie, Principal Lecturer in Nursing, DeMontfort University; Dr John Pounsford, Consultant Physician, Frenchay Hospital, Bristol; Dr John Rodriguez, Assistant Director of Public Health, NHS Eastern and Coastal Kent; Alun Roebuck, Consultant Nurse in Critical and Acute Care, United Lincolnshire NHS Trust; Cliff Snelling, Lay Member; Marta Soares, Research Fellow, Centre for Health Economics, University of York; Professor Andrew Stevens, Professor of Public Health, Department of Public Health and Epidemiology, University of Birmingham; Dr Nerys Woolacott, Senior Research Fellow, Centre for Health Economics, University of York

Financial Disclosures/Conflicts of Interest

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: National Institute for Health and Clinical Excellence (NICE). Alteplase for the treatment of acute ischaemic stroke. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Jun. 22 p. (Technology appraisal guidance; no. 122).

Guideline Availability

Electronic copies: Available from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#) .

Availability of Companion Documents

The following are available:

- Alteplase for treating acute ischaemic stroke. Costing Template. London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sep 26. Various p. (Technology appraisal 264). Electronic copies: Available from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#) .
- Alteplase for treating acute ischaemic stroke. Clinical audit tool. London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sep 26. 7 p. (Technology appraisal 264). Electronic copies: Available from the [NICE Web site](#) .
- Alteplase for the treatment of acute ischaemic stroke (review of technology appraisal guidance 122). Evidence Review Group Report. School of Health and Related Research (SchARR), The University of Sheffield, UK. 2012 May 30. 110 p. Electronic copies: Available in Portable Document Format (PDF) from the [NICE Web site](#) .
- Stroke overview. NICE pathway. London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sept. (Technology appraisal guidance; no. 264). Electronic copies: Available from the [NICE Web site](#) .

Patient Resources

The following is available:

- Alteplase for treating acute ischaemic stroke. Understanding NICE guidance - Information for people who use NHS services. London (UK): National Institute for Health and Clinical Excellence (NICE); 2012 Sep. 6 p. (Technology appraisal 264). Electronic copies: Available in Portable Document Format (PDF) from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#) .

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NGC Status

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